

Amendments to the Claims

Claim 1 (currently amended) A bee monitoring system for monitoring bee colonies in a hive comprising:

- a microprocessor;
- at least two input transducers; and
- at least two output signals, wherein said output signals are capable of controlling remote devices.

Claim 2 (previously presented) The monitoring system of claim 1, wherein said system has at least three input transducers.

Claim 3 (previously presented) The monitoring system of claim 1, wherein said system has at least four input transducers.

Claim 4 (previously presented) The monitoring system of claim 1, wherein said system has at least five input transducers.

Claim 5 (previously presented) The monitoring system of claim 1, wherein said system has at least six input transducers.

Claim 6 (previously presented) The monitoring system of claim 1, wherein said system has at least seven input transducers.

Claim 7 (previously presented) The monitoring system of claim 1, wherein said system has at least eight input transducers.

Claim 8 (previously presented) The monitoring system of claim 1, wherein said input transducers are selected from the group consisting of a temperature sensor, a scale, a humidity sensor, a global positioning system, and a counter.

Claim 9 (previously presented) The monitoring system of claim 1, wherein said output signals are transmitted by a method selected from the group consisting of telephone line, radio, and satellite.

Claim 10 (canceled)

Claim 11 (currently amended) The monitoring system of claim 1, wherein said microprocessor is a RABBIT™ 2000 microprocessor comprises a single board, at least eight input transducers, at least eight output signals, at least one serial port, said microprocessor running at least at 10 megahertz, and comprising at least 64 kilobytes of random access memory.

Claim 12 (currently amended) The monitoring system of claim 1, wherein one of said at least two input transducers is a bee counter comprising:

at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a debounce circuit;
a microprocessor; and
a multiplexer.

Claim 13 (previously presented) The monitoring system of claim 12, wherein said hive has a plurality of doors and said counter has a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.

Claim 14 (currently amended) The monitoring system of claim 12, wherein said microprocessor is a RABBIT™ 2000 microprocessor comprises a single board, at least eight input transducers, at least eight output signals, at least one serial port, said microprocessor running at least at 10 megahertz, and comprising at least 64 kilobytes of random access memory.

Claim 15 (currently amended) The monitoring system of claim 12, wherein bees are counted as a bee passes said emitter and two detectors of said at least one set of an emitter and two detectors creating a state comprising a sequence of bits in a stack; said microprocessor comprising programming comprising the steps of: has the programming shown in FIG. 3

comparing a current state to a previous state; and based on that comparison determining:
if said bee passed from the outside of said hive to the inside of said hive, then recording an "in" count;
if said bee passed from the inside of said hive to the outside of said hive, then recording an "out" count; and
if said bee did not pass said emitter and two detectors, then resetting the state.

Claim 16 (previously presented) A bee counter for a hive comprising:

at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a debounce circuit;
a microprocessor; and
a multiplexer.

Claim 17 (previously presented) The bee counter of claim 16, wherein said hive has a plurality of doors and said counter has a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.

Claim 18 (currently amended) The bee counter of claim 16, wherein said microprocessor is a RABBITTM 2000 microprocessor comprises a single board, at least eight input transducers, at least eight output signals, at least one serial port, said microprocessor running at least at 10 megahertz, and comprising at least 64 kilobytes of random access memory.

Claim 19 (currently amended) The bee counter of claim 16, wherein bees are counted as a bee passes said emitter and two detectors of said at least one set of an emitter and two detectors creating a state comprising a sequence of bits in a stack; said microprocessor comprising programming comprising the steps of: has the programming shown in FIG. 3

comparing a current state to a previous state; and based on that comparison determining if said bee passed from the outside of said hive to the inside of said hive, then recording an "in" count;

if said bee passed from the inside of said hive to the outside of said hive, then recording an "out" count; and

if said bee did not pass said emitter and two detectors, then resetting the state.

Claim 20 (previously presented) A bee monitoring system for monitoring bee colonies in a hive comprising:

- a microprocessor;
- at least eight input transducers selected from the group consisting of a temperature sensor, a scale, a humidity sensor, and a global positioning system;
- a counter comprising at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit, and a de-bounce circuit; a microprocessor; and a multiplexer, wherein the hive comprises a plurality of doors and the counter comprises a plurality of emitters and a plurality of detectors and the counter is capable of counting bees in a single door of the hive; and
- at least two output signals, wherein the output signals are transmitted by a method selected from the group consisting of telephone line, radio, and satellite and wherein the output signals are capable of controlling remote devices.